

ACC NR: AT7001813

SOURCE CODE: UR/2778/66/000/015/0072/0078

AUTHOR: Yurchuk, V. A.; Zlatin, A. L.; Gershenson, G. S.

ORG: none

TITLE: Resistance telemetering system

SOURCE: Leningrad. Nauchno-issledovatel'skiy institut gidrometeorologicheskogo priborostroyeniya. Trudy, no. 15, 1966, 72-78

TOPIC TAGS: telemetry system, telemetry transmitter, telemetry receiver, hydrometeorology, telemetry, electric resistance telemeter, resistance telemeter, pulse bridge telemeter

ABSTRACT: The authors discuss the principles of the construction of simple pulse-bridge telemetric systems for measuring hydrometeorological resistance when the measurement of meteorological elements is reduced to the measurement of electric resistance. The system consists of a measuring-and-transmitting unit and a receiving-and-recording unit. Circuit diagrams are given for the transmitter and receiver units, and the design of the various elements in the units is described. Orig. art. has: 3 figures and 19 formulas. [Based on authors' abstract] [SP]

SUB CODE: 08,09/SUBM DATE: none/ORIG REF: 001/

Card 1/1

ACC NR: AT7001818

SOURCE CODE: UR/2778/66/000/015/0129/0137

AUTHOR: Zlatin, A. L.; Titov, V. A.

ORG: none

TITLE: Methods of diminishing the energy consumption by discrete-action elements  
(review)

SOURCE: Leningrad. Nauchno-issledovatel'skiy institut gidrometeorologicheskogo  
priborostroyeniya. Trudy, no. 15, 1966, 129-137

TOPIC TAGS: hydrometeorology, measuring instrument, discrete action electronic  
device, discrete action device, hydrometeorological instrument, energy consumption

ABSTRACT: The authors examine the conditions surrounding the operation of  
discrete-action electronic devices used in hydrometeorological instruments. The  
basic requirements for the elements in these devices are outlined. Methods of  
decreasing the energy consumption of these discrete-action devices are reviewed.  
Orig. art. has: 6 figures. [Translation of abstract] [SP]

SUB CODE: 08, 09/SUBM DATE: none/ORIG REF: 011/OTH REF: 003/

Card 1/1

VOLOSEVICH, A.N.; ZLATIN, A.L.; TARASOV, G.V.

Converter of frequency-modulated signals of a televisorde in  
the sending of direct current. Trudy NITOMP no. 12:63-66 '64.  
(NIKA 18:4)

VOLODARSKIY, L.Ya., podpolkovnik meditsinskoy sluzhby; ZLATIN, A.M.,  
podpolkovnik meditsinskoy sluzhby

Organization of health education in a unit. Voen.-med. zhur.  
no.4:71 Ap '61. (MIRA 15:6)

(HEALTH EDUCATION)

20099

S/018/61/000/001/001/005

A110/A026

166500

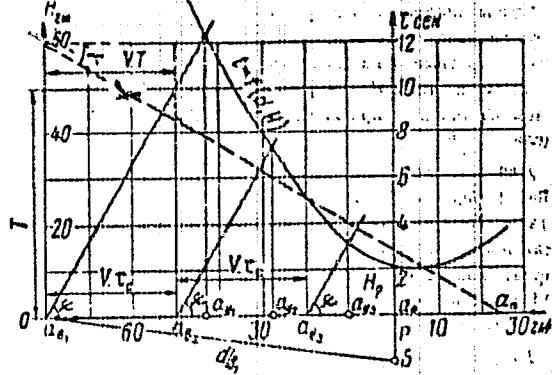
AUTHOR: Zlatin, I., Colonel

TITLE: Graphical Solution of Antiaircraft Firing Problems

PERIODICAL: Voyenny vestnik, 1961, No. 1, pp. 83 - 86

TEXT: The author deals with the graphical representation of firing at an aircraft changing altitude and speed. In the first example (Fig. 1) the graphical solution for a diving aircraft is explained. It is assumed that the target's flight path angle is  $\lambda = 30^\circ$ , speed  $V = 300 \text{ m/sec}$ , horizontal range to target at nearest position  $P = 10 \text{ hm}$ , target angle 15-00, altitude  $H = 60 \text{ hm}$ . The range of the first shot  $D_{f_1} = 100 \text{ hm}$ . The firing is done with small-caliber antiaircraft guns in three consecutive rounds in 10 sec intervals. Based on the horizontal distance  $d_{f_1} = 80 \text{ hm}$  and the horizontal range to target at nearest position ( $P$ ),

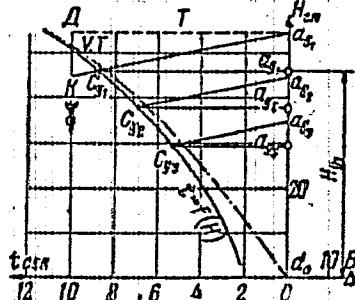
Card 1/3



20009  
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A110/A026

## Graphical Solution of Antiaircraft Firing Problems

the horizontal projection of the target course and its length from the point  $a_1$  to P is computed by  $S = \sqrt{d_{v_1}^2 - p^2} = \sqrt{80^2 - 10^2} = 79.4$  km. The traveling time t of the projectile was established by the ballistic table and is shown in the curve  $t = f(d, H)$ . In the second example (Figure 2) the graphical solution for a vertical dive of the target is explained, in which case the horizontal distance can not be used. It is assumed: the aircraft's diving speed  $V_H = 100$  m/sec on a target 1,500 m away ( $d = 15$  hm) from the antiaircraft battery (B), altitude of the first shot  $H_{61} = 55$  hm of three consecutive rounds of  $T_S = 10$  sec intervals. On the vertical grid line 0 - H, the altitude is plotted to the right of the point 0 the distance  $d = 15$  hm between target and antiaircraft battery (B), whereas the traveling time of the projectile is plotted on the horizontal grid line 0 - t. Based on the ballistic values of the horizontal distance of 15 hm and the variable altitude, the projectile's traveling time is established and shown in the curve  $t = f(H)$ . The first predicted point is established on the line  $a_{v_1} - K$ . From the point  $\Delta$  (D) the sector  $V \cdot T = \Delta K = 100 \cdot 10 = 10$  hm is established. The point of intersection of the curves  $t = f(H)$  and  $a_{v_1} - K$  is the predicted point  $\Delta$ .



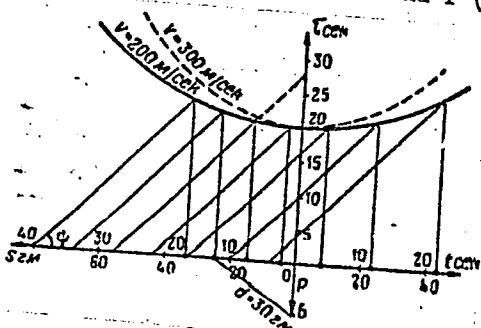
Card 2/3

20099

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A110/A026

## Graphical Solution of Antiaircraft Firing Problems

tion of the lines  $a_1 - K$  and  $f(H)$  shows on the vertical grid line  $H$ , the position of  $a_1$  and its altitude  $H_{y_1}$ . For easier and quicker computation standardized coordinate map grids (Figure 3) are recommended, in which on the abscissa the target's traveling time ( $t$ ) and on the ordinate the projectile's traveling time ( $\tau$ ) are plotted in the scale  $1\text{sec} = 10\text{mm}$ . There are 3 figures.



Card 3/3

ZLATIN, I.

177T90

USSR/Radio - Wired Centers

Dec 50

"U.S. Military - Wired Radio Equipment." I. Zlatin,

\* Czechoslovakia

"Radio" No. 12 pp 16-19

Stages of modulator: 1. Diagnams of intermodulator amplifier,  
2. Frequency response characteristics of microstrahl. A  
circuit diagram of the modulator and filter from:  
"Radio" No. 12 pp 16-19

FDT

177T90

ACC NR: AP7002398

SOURCE CODE: UR/0363/66/002/012/2125/2129

AUTHOR: Goryunova, N. A.; Grigor'yan, S. S.; Zlatkin, L. B.

ORG: Physicotechnical Institute im. A. F. Ioffe, Academy of Sciences, SSSR (Fiziko-tehnicheskiy institut Akademii nauk SSSR)

TITLE: Structure of the conduction band of ZnSiP<sub>2</sub>

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 12, 1966, 2125-2129

TOPIC TAGS: zinc compound, silicon compound, phosphide, conduction band, absorption edge, absorption coefficient, Hall effect

ABSTRACT: In order to obtain data on the structure of the conduction band of the compound ZnSiP<sub>2</sub> (a diamondlike semiconductor of type Al<sub>II</sub>B<sub>IV</sub>C<sub>2</sub>V and electronic analog of Al<sub>III</sub>B<sub>V</sub>), the fundamental absorption edge of ZnSiP<sub>2</sub> single crystals was studied in the 1.5-2.7 eV range of photon energies at 300 and 77°K. The Hall effect and absorption coefficient  $\alpha$  were measured on n-type ZnSiP<sub>2</sub> single crystals. The observed dependence of  $\alpha^2$  on the energy of incident photons,  $\alpha \sim (hv - E_g)^{1/4}$ , shows that the forbidden gap width of ZnSiP<sub>2</sub> is determined by direct allowed transitions at point K=0 of the Brillouin zone. The forbidden gap width  $E_g \text{ opt} = 2.00 \pm 0.01 \text{ eV}$  ( $T=300 \text{ }^\circ\text{K}$ ). The temperature coefficient of the forbidden gap width in the 77-300°K range is equal to  $-4 \times 10^{-4} \text{ eV/deg}$ . On the basis of the concentration shift of the fundamental absorption edge, the width of the conduction band is estimated to be  $0.15 \text{ eV}$ .

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Card 1/2

ACC NR: AP7002398

tion edge, the effective mass of a conduction electron of ZnSiP<sub>2</sub> was found to be 0.08 (using the formula of T. S. Moss), 0.074 (using the formula of S. Burstein), and 0.13 (using the formula of W. Kaiser and H. Y. Fan) for  $n = 1 \times 10^{19} \text{ cm}^{-3}$ . In conclusion, authors express their thanks to Corresponding Member AN SSSR Ye. F. Gross for discussing the results of the work. Orig. art. has 4 figures and 4 formulas.

SUB CODE: 20/ SUBM DATE: 04Jan66/ ORIG REF: 009/ OTH REF: 007

Card 2/2

AUTHOR: Zlatin, L.E., and Mamatov, A.D. (Kemerovsk Coke Oven Works).

TITLE: From the experience of changing reinforcing frames. 141  
(Opyt zameny armiruyushchikh ram.)

PERIODICAL: "Koks i Khimiya", (Coke and Chemistry),  
1957, No. 2, pp. 33 - 35, (U.S.S.R.)

ABSTRACT: The procedure developed for replacing coke oven  
reinforcing frames from the pusher and the coke side is  
given in some detail.  
There are four illustrations.

ZLATIN, L.I.

Modernization of equipment and mechanization of labor  
consuming processes. Koks i khim. no. 12:54-58 '61.  
(MIRA 15:2)

1. Kemerovskiy koksokhimicheskiy zavod.  
(Kemerovo-Coke industry-Equipment and supplies)

ZLATIN, L.I.; GOROVY, T.P.; SEMENOVA, O.A.; SHTEYN, A.L.

Dephenolization of industrial phenol-containing waste waters with  
benzol extraction. Koks i khim. no.6:42-44 '63. (MIRA 16:9)

1. Kemerovskiy koksokhimicheskiy zavod.  
(Industrial wastes--Purification) (Phenols)  
(Benzene)

ZLATIN, L.P., KRETOV, B.K.

Complete mechanization of the loading of ammonium sulfate  
into closed cars. Koks i khim. no.12:50-52 '57. (MIRA 11:1)

1. Kemerovskiy koksokhimicheskiy zavod.  
(Ammonium sulfate) (Loading and unloading)

ZLATIN, L. I.

68-12-22/25

AUTHOR: Zlatin, L.I. and Kretov, B.K.

TITLE: Mechanization of Loading Ammonium Sulphate in Box  
Cars (Kompleksnaya mekhanizatsiya pogruzki sul'fata  
ammoniya v krytyye vagony)

PERIODICAL: Koks i Khimiya, 1957, No.12, pp. 50 - 52 (USSR)

ABSTRACT: Mechanization of loading ammonium sulphate in covered  
wagons, organised on the Kemerov Coke Oven Works, is described  
and illustrated. There are 3 figures.

ASSOCIATION: Kemerovo Coke-chemical Plant (Kemerovskiy koksokhimicheskiy  
zavod)

AVAILABLE: Library of Congress

Card 1/1

ZIATIN, L.I.; KRETOV, B.K.; PANENKO, F.M.

Use of self-sealing doors in pitch coke ovens. Koks i khim. no.4:51  
'60. (MIRA 13:6)

1. Kemerovskiy koksokhimicheskiy zavod.  
(Kemerovo--Coke ovens)

ZLATIN, L.I.; KRETOV, B.K.

Automatic opening of the gates of coke ramps. Koks i khim. no.1:  
41-45 '56.  
(MLRA 9:5)

1. Kemerovskiy koksokhimicheskiy zavod.  
(Coke industry--Equipment and supplies)

ZLATIN, L.I.; GOROVY, G.P.; ZOLOTAREV, K.V.; MASHKOVSKIY, P.D.

Sorting coal according to size by a mechanical throwing belt  
conveyer. Koks i khim. no.1:21-23 '62. (MIRA 15:2)

1. Kemerovskiy koksokhimicheskiy zavod.  
(Coal-handling machinery)

"APPROVED FOR RELEASE: 03/15/2001

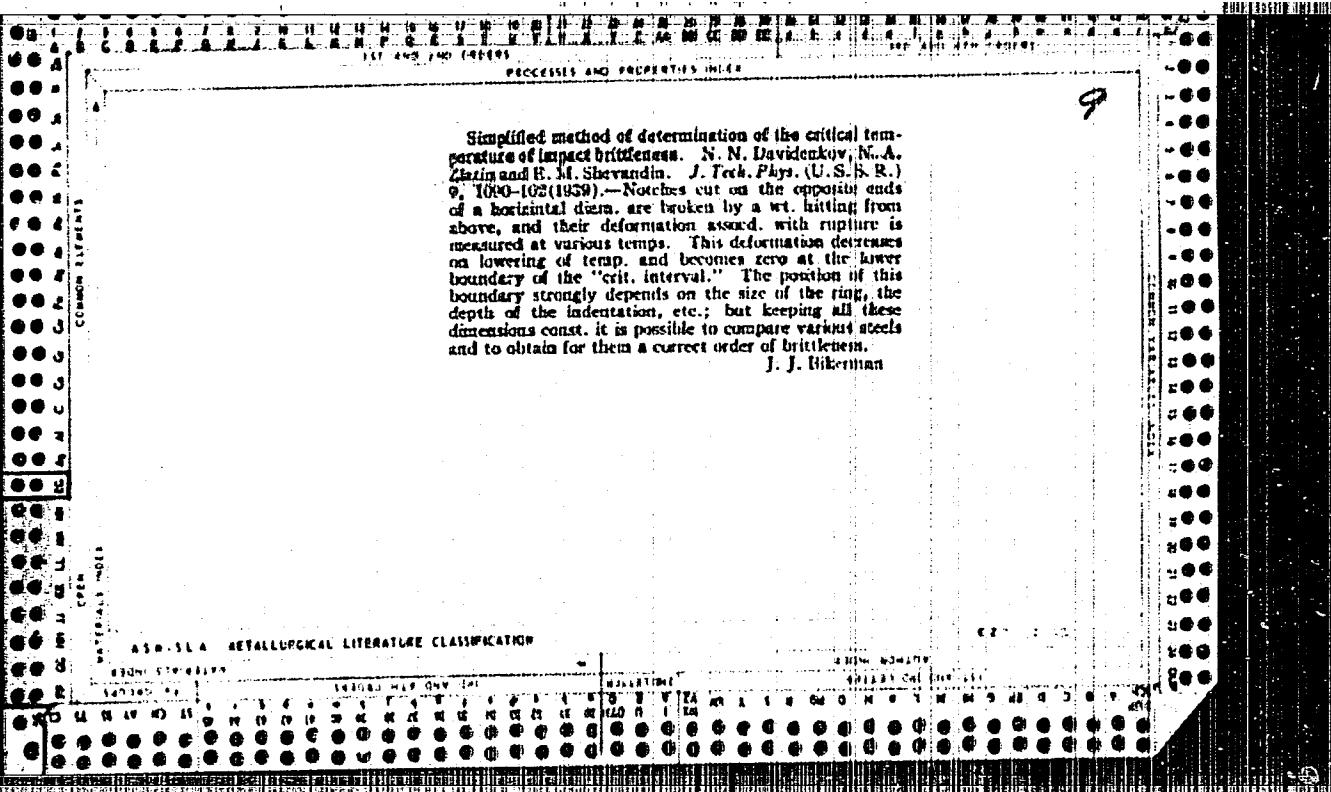
CIA-RDP86-00513R002065310007-7

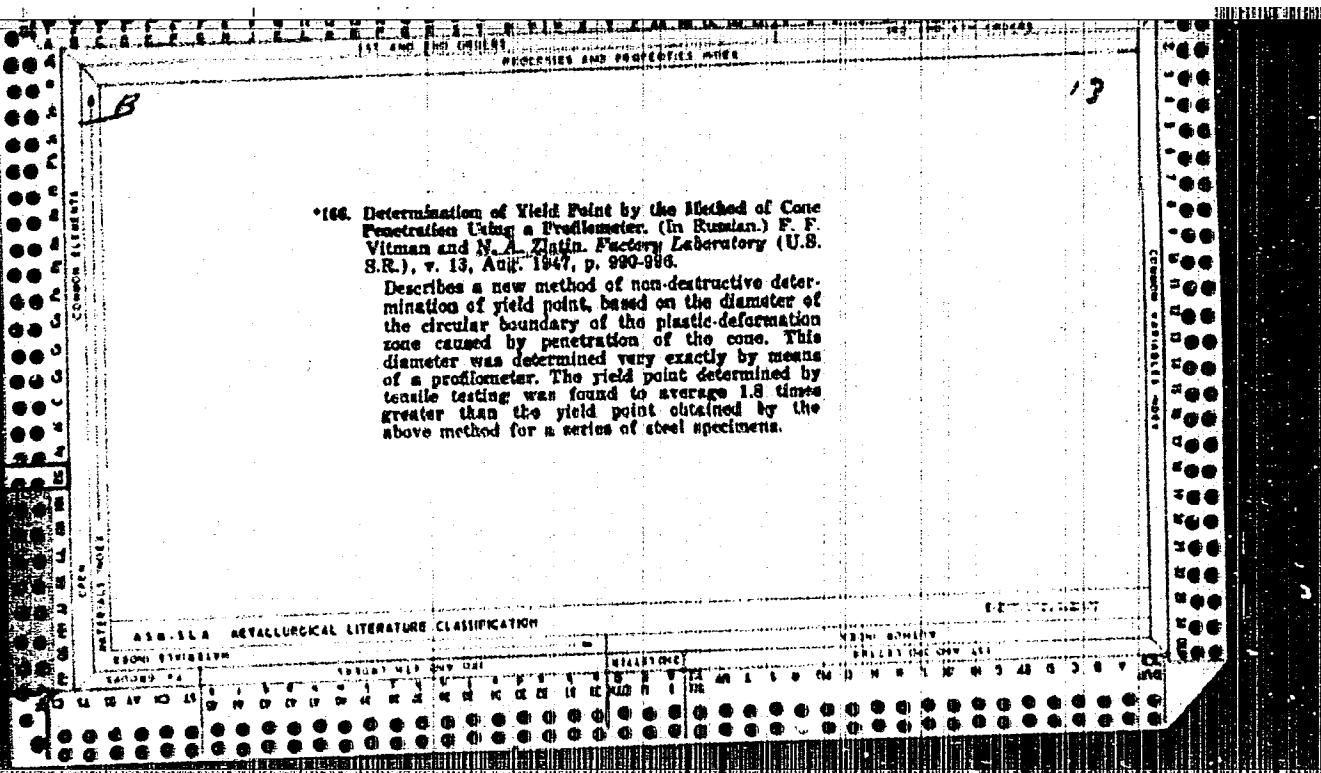
ZLATIN, M.

Learn lifesaving in drowning cases. Voen. znam. 31 no.9:27 S '55.  
(Lifesaving)  
(MLRA 9:2)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7"





USSR/Metals

PA 75T87

May 1948

Testing Procedures

Deformation

"The Use of Conical Impressions for the Study of the Effect of Speed on the Resistance of Metals to Deformation," F. F. V itman, N. N. Davidenkov, N. A. Zlatin, B. S. Ioffe, Leningrad Phys Tech Inst, Acad Sci USSR, 16 pp

"Zavod Lab" Vol XIV, No 5

Discusses plastic deformation of metals and determination of hardness and yield point by means of conical impressions produced by ballistic pendulum method. Presents mathematical treatment of various effects.

75T87

ZLATIN, N.

"Basic Reasons for Good Machinability of "Free Machining" Steels," TASM 41 (1949) pp 647/672; disc 672/677.

Comments and Evaluation B-78524, 8 Sep 54

PL 38/4994

Metals  
Deformation  
Stress Analysis

Mar 49

The Resistance of Metals to Deformation for Deforma-  
tion Rates of  $10^{-6}$  to  $10^2$  Meters/Second, II, "F. F.  
Zlatin, N. A. Zlatin, Leningrad Physicotech Inst,  
Bul. Sc. USSR, 12 pp

Author Tokh Riz" Vol XIX, No 3

Describes experiments in determining dependence of  
resistance of lead and soft steel to deformation  
upon speed of deformation by method of introducing  
stress at various temperatures. Experimental  
results indicate presence of variations in rate ( $10^{-3}$ )

ISSR/Metals (Contd)

MAP 49

to  $10^5$  sec<sup>-1</sup>) in three regions, of the experimental  
range, each distinguished by the character of the  
deformation process. Submitted 25 Nov 48.

38/4994

ZIATIN, N. A.

Mar 49

USSR/Metals  
Deformation

Stress Analysis

Resistance of Metals to Deformation. For  
Deformation Rates of  $10^{-5}$  to  $10^2$  Meters/Second,  
V. M. P. F. V'itman, N. A. Ziatin, B. S. Ioffe,  
Leningrad Physicotech Inst., Acad Sci USSR, 15 pp

Vestn. Tekh. Fiz." Vol XIX, No 3

Introduces simple new method to study dependence  
of deformation resistance of metals on speed of  
deformation. Gives results of experiments with  
lead, aluminum, copper, soft steel, and duralumin.  
28/49295

USSR/Metals (Contd)

Mar 49

Proves that, within a wide range, variation in  
deformation rate cannot be the only relationship  
between resistance-to-deformation and rate.  
Comparison of experimental results with other data  
showed that method is fully justifiable. Submitted  
25 Nov 48.

Valuation B - 81183

38/49295

ON THE APPLICABILITY OF THE METHOD OF CONE INDENTATION FOR THE DETERMINATION OF THE YIELD POINT AT HIGH SPEEDS OF DEFORMATION. RF Vitman and NA Lutin. Zavodskaya Laboratoriya, 1949, vol. 15, Apr., pp 453-456. In Russian. Experiments are described which were carried out to examine the possibility of using the cone method with any speed of deformation for determining the yield point. A study was made of the deformed region around indentations of equal depth produced by cone speeds of  $10^{-6}$  to  $10^2$  m/sec on specimens of mild steel. Radical changes in the deformed region were found to result from variations in the speed of deformation but no detailed relationships could be established. The experiments were carried out at  $-60^\circ$ ,  $-120^\circ$ , and  $-180^\circ$  C., between the yield point and the characteristic speed of deformation at each temperature are shown graphically.

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7

ZLATIN, N.

"Evaluation of Machinability of Rolled Steels, Forgings and Cast Irons," *Machining-Theory and Practice*. ASM (1950).

Comments and Evaluation B-78524, 8 Sep 54

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7"

SA

A 53  
FF

339.411.3  
 8215. Resistance to deformation of metals at velocities  $10^{-4}$ - $10^2$  cm/sec. III. P. I. VITMAN AND N. A. ZALIN. *J. Tech. Phys., USSR*, 10, 1267-73 (Oct., 1950) *in Russian*.

For Pt II, see Abir, 3713 (1949). Results of experiments with Cu, Zn, Al and Sn again confirm the existence, in the range covered by the tests of variations of temperature and velocities of 3 separate ranges of variation of these parameters within each of which one definite mechanism for the influence of velocity on the resistance to plastic deformation predominates. In post-recrystallization conditions of deformation the tests fully reproduced the conditions previously found in experiments with Pb and corroborated the equation representing them, viz.  $H_K = H_{K_0}(\sigma/\sigma_0)e^{(E_f - E)/T}$ . On the other hand, in pre-recrystallization deformation of the soft metals mentioned the temperature relation was not fully brought out to satisfy the expression previously found for it, viz.  $H_K = M/e^{\exp(N/T)}$ . The results of this test series, just as the previous experiments with Pb, showed that the kink on the characteristics of the deformation resistance v. speed at temperatures exceeding the recrystallization temperature corresponds for all the metals to approximately the same resistance value independent of speed and temperature.

B. F. SCHALES

Strength Physics -  
Tech. Inst.  
AS USSR

A.I.F.S.D. METALLURGICAL LITERATURE CLASSIFICATION

PA-236T62

USSR/Metallurgy - Carbon Steel	Oct 92
<p>"Dependence of Hardness of Medium Carbon Steel on Velocity of Deformation Temperature and Thermal Treatment," N. A. Zlatin and N. Ya. Nikolenko</p>	
<p>"Zhur Tekh Fiz" Vol 22, No 10, pp 1565-1571</p>	
Dependence of resistance to deformation of steel 40 on velocity of deformation and temp of 4 different states was tested. Velocities were varied from $\sim 10^{-3}$ to $2 \cdot 10^{-3}$ /sec at temp -180 to +400° C. Dynamic coeff was found not to be a common characteristic. Activation energy was evaluated. Indebted to N. N. Davidenko and F. I. Vitman. Received 5 Jul 52.	236T62

USSR, Physics - Metals, Mechanical Properties

FD 370

Card 1/1

Author : Vitman, F. F., Zlatin, N. A., Ioffe, B. S., Shestopalov, L. M.

Title : Determination of the mechanical properties of metals at elevated temperatures by means of a small conical indentation and a shallow scratch

Periodical : Zhur. tekh. fiz. 24, 549-559, Mar 1954

Abstract : Describes equipment for determining in vacuum mechanical properties of metals, demonstrating possibility of using method of small conical indentation for determining yield point and ultimate strength in the region of elevated temperatures. Establishes also that determination of tensile strength by means of short shallow scratches is infeasible at high temperatures. Seven references, all USSR; one 1935, others 1949-1952. Graphs, illustrations.

Institution :

Submitted : October 6, 1953

VITMAN, F.F., prof., doktor fiz.-mat.nauk, otv.red.; IOFFE, A.P., akademik, red.; KURDYUMOV, G.V., akademik, red.; ZHURKOV, S.N., red.; KONSTANTINOV, B.P., red.; GLIKMAN, L.A., prof., doktor tekhn. nauk, red.; ZLATIN, N.A., doktor fiz.-mat.nauk, red.; STEPANOV, V.A., doktor tekhn.nauk, red.; FRIDMAN, Ya.B., prof., doktor tekhn.nauk, red.; IOFFE, B.S., kand.tekhn.nauk, red.; AVER'YANOV, V.I., red.izd-va; PEVZNER, R.S., tekhn.red.

[Some problems on the strength of solid bodies; collection of articles dedicated to the 80th birthday of N.N.Davidenkova, member of the Academy of Sciences of the Ukrainian S.S.R.] Nekotorye problemy prochnosti tverdogo tela; sbornik statei, posviashchennyi vos'midesiatiletiiu akademika AN USSR N.N.Davidenkova. Moskva, 1959. 386 p.

(MIRA 12:6)

1. Akademiya nauk SSSR. 2. Chlen-korrespondent AN SSSR (for Zhurkov, Konstantinov).

(Strength of materials)

24(6)	PAGE 1 BOOK INFORMATION	SERIAL NUMBER
Akademie Nauk SSSR		
Blastology problem preoccupation throughout world; overall status (Some Problems in the Treatment of Explosives). Collection of Articles. Moscow, Izd-vo Akad. Nauk, 1959. 956 p. Kraus 210 Internat. 2,000 copies printed.		
Editorial Board: V. I. Aver'yanov (Chair), M. I. E. S. Petrov!		
F. F. Goryainov, Corresponding Member, USSR Academy of Sciences; B. P. Kostomarov, Corresponding Member, USSR Academy of Sciences; V. V. Titman, Doctor of Physical and Mathematical Sciences, Professor (Chair); M. I. L. A. Olsoum, Doctor of Technical Sciences; V. A. Savchenko, Doctor of Technical Sciences; T. A. Pecherskaya, Doctor of Technical Sciences; Professor, B. S. Porte, Doctor of Technical Sciences (Deputy Chair, Ed.).		
Editor: This book is intended for specialists working in the strength of materials, metallurgy, physics,		
metallurgists and Al Rum (Department of Applied Physics and Mathematics), and the Physics-Chemical Institute of the USSR Ministry of Science and Education of Sciences (USSR) in connection with the Total Survey of Military Technology Environment. Papers of the Institute dealing with the study and use of the explosive materials (Department of Research of Materials at the Institute of Applied Physics Academy of Sciences, USSR, Director of the Institute of Explosives Technology, All-Union Institute of Experimental Polymers (Institute of Synthetic Polymers), the Faculty of Polytechnic Institutions, etc.), the Order of the Red Banner of Labor, (1955) and the Order of Lenin (1955). The articles deal with the strength of materials, processes of impact, elasticity, tempering, brittleness, hydrogen embrittlement, cold brittleness, influences of deformation speed on the mechanical properties of materials, influence of metals and general properties of the strength, plasticity, and mechanical properties of explosives. Numerous publications are mentioned in the introduction. References and footnotes are given at the end of each article.		
M. I. L. A. Olsoum, and V. P. Dzhel. Investigation of the Strength Properties of Permanent Magnetic Alloys	140	
P. N. Parkh., and G. B. Rastorguyev. Dynamic Embrittlement of Steel and the Influence of Mechanical Working Conditions on its Occurrence	152	
S. S. Shabotov, Yu. N. Sosulin, and S. F. Petrova. Institute for Metal Products, Ural Branch, Academy of Sciences, USSR. Structural Strength of Structural Steel 165		
V. A. Savchenko (Institute of Materials, AM RUM). Effect of the Cooling Rate on the Strength of Other Metals	167	
A. S. Agayev, I. V. and V. A. Savchenko (Institute of Materials, AM RUM). Influence of the Degree of Purety on Gold Metallurgy and Other Properties of Metals	172	
M. I. L. A. Olsoum, and Yu. D. Toplits. Cold Hardening of Pure IIEE Steel with an External Layer of Aluminum Steel Alloy	179	
P. S. Balashov (Industrial Test Institute, Leningrad). Effect of the Cooling Rate on the Strength of Other Metals	185	
V. V. Titman (Institute of Applied Physics, Academy of Sciences of the USSR). Influence of Impact on Rupture Strength of Chromium-Aluminum Steel and Some Other Metals	191	
P. M. Goryainov, I. A. Savchenko, and A. V. Tolchik. Influence of the Scale Factor during Plastic Deformation and Rupture of Metals or Varying Strength	198	
V. A. Savchenko (Institute of Applied Physics, Academy of Sciences of the USSR). Influence of Impact on Rupture Strength of 10 <sup>3</sup> -10 <sup>4</sup> /sec Formation Instability of Metals at Impact Speeds of 10 <sup>3</sup> -10 <sup>4</sup> /sec	207	
Z. S. Goryainov (Institute of Applied Physics, Academy of Sciences, USSR). Influence of Compressibility in the Dynamic Deformation of Plastic Metals	222	
K. V. Kondratenko, Yu. V., and Ye. G. Goryainov. Influence of a High Deformation Rate on the Mechanical Properties of Steel Alloys Type V-5 After Heating	230	
B. S. Porte, and V. P. Dzhel. Physical Nature of Metal Fatigue	236	
I. V. Olyanovskiy, and I. M. Savchenko (Institute of General Scientific Research Institute of Technology and Mechanics). Fatigue Strength of Large Plates	256	

ZLATIN, N.A.

Comments on the theory of high-speed collisions of metallic bodies. Zmnr.tekh.fiz. 31 no.8:982-990 Ag '61.

(MIREA 14:8)

1. Fiziko-tehnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad.  
(Hydrodynamics) (Impact)

VITMAN, F.F.; ZLATIN, N.A.

Comments of IU.IA.Voloshenko-Klimovitskii's article "Regularities in  
the changes of the yield point at high loading speeds and low tempera-  
tures." Izv.AN SSSR.Otd.tekh.nauk.Mekh.i mashinostr. no.6:175 N-D '62.  
(MIRA 15:12)  
(Low temperature research) (Voloshenko-Klimovitskii, IU.IA.)

17,1107 (3707,2623)

40564  
S/020/62/146/002/005/013  
B104/B108

AUTHORS: Vitman, F. F., Zlatin, N. A.

TITLE: A problem of the collision of plastic bodies

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 2, 1962, 337 - 339

TEXT: The collision of a plastic solid of revolution (2) with a plastic semispace (1) is studied on the assumption that the axis and the velocity vector of (2) coincide with the surface normal to the semispace. The problem is solved in terms of the theory of dimensions (L. I. Sedov, Metody podobiya i razmernosti v mekhanike - Methods of similitude and dimensions in mechanics, M., 1957). The parameters of the shock adiabate are used to allow for the compressibility of the two bodies, a linear relation being assumed to exist between the velocity D of the shock wave and the mass velocity u behind the wave front. The pressure behind the wave front is then  $p = \rho_0 Du = \rho_0(a + bu)u$ , where a and b are constants of the material, determined from the shock adiabate, and  $\rho_0$  is the density at standard pressure. The process is described by the impact velocity  $v_0$ , the

Card 1/4

S/020/62/146/002/005/013  
B104/B108

A problem of the collision...

dynamic hardnesses  $H_1$  and  $H_2$ , the densities  $\rho_{01}$  and  $\rho_{02}$  at standard pressure, the cohesion energies  $Q_1$  and  $Q_2$ , the compressibility characteristics  $a_1$ ,  $a_2$ ,  $b_1$  and  $b_2$ , the diameter  $d_0$  of the characteristic cross section, the characteristic length  $l_0$  of the body (2), and by the depth  $L_k$  of the indent resulting from the collision in (1). In accordance with the  $\Pi$ -theorem of the theory of dimensions, the 15 parameters stated above may be replaced by 12 dimensionless combinations. An implicit equation for the process under consideration can be derived from the functional relation between these combinations:

$$\frac{L_k}{l_0} = f \left( \frac{\rho_{01}a_0^2}{H_1}, \frac{H_1}{H_2}, \frac{\rho_{02}}{\rho_{01}}, k_0, \frac{l_0}{d_0}, a_1 \sqrt{\frac{\rho_{01}}{H_1}}, \frac{\rho_{02}a_2}{\sqrt{\rho_{01}H_1}}, b_1, \frac{\rho_{02}b_2}{\rho_{01}}, \frac{\rho_{01}Q_1}{H_1}, \frac{Q_2}{Q_1} \right), \quad (2),$$

which, according to Sedov, can be reduced to

Card 2/4

A problem of the collision...

S/020/62/146/002/005/013  
B104/B108

$$\frac{L_x}{l_0} = F \left( \frac{p_{01}v_0^2}{H_1}, \frac{H_2}{H_1}, \frac{p_{02}}{p_{01}}, k_0, \frac{l_0}{d_0}, a_1 \sqrt{\frac{p_{01}}{H_1}}, \frac{p_{02}a_2 - p_{01}a_1}{\sqrt{p_{01}H_1}}, b_1, \frac{p_{02}b_2 - p_{01}b_1}{p_{01}}, \frac{p_{01}Q_1}{H_1}, \frac{Q_2}{Q_1} \right) \quad (3),$$

whence

$$\frac{L_x}{l_0} \simeq \Phi \left( \frac{p_{01}v_0^2}{H_1}, \frac{H_2}{H_1}, \frac{p_{02}}{p_{01}}, k_0, \frac{l_0}{d_0}, \frac{p_{01}a_2 - p_{01}a_1}{\sqrt{p_{01}H_1}}, \frac{p_{02}b_2 - p_{01}b_1}{p_{01}}, \frac{p_{01}Q_1}{H_1}, \frac{Q_2}{Q_1} \right). \quad (4)$$

is obtained on the assumption that  $a_1 \sqrt{p_{01}/H_1} \approx \text{const}$  and  $b_1 \approx \text{const}$ . The form of (4) is considered for five particular conditions of impact.

ASSOCIATION: Fiziko-tehnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physicotechnical Institute imeni A. F. Ioffe of the Academy of Sciences USSR)

PRESENTED: January 8, 1962, by B. P. Konstantinov, Academician  
Card 3/4

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7

A problem of the collision...

S/020/62/146/002/005/013  
B104/B108

SUBMITTED: January 3, 1962

J.

Card 4/4

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7"

L 18105-63

EWP(q)/EWI(m)/EDS AFTTC/ASD JD

ACCESSION NR: AP3001707

S/0126/63/015/005/0796/0798

57  
55

AUTHORS: Vitman, F. F.; Zlatin, N. A.

TITLE: Regular changes in flow limit at rapid loading rates and low temperatures

SOURCE: Fizika metallov i metallovedeniye, v. 15, no. 5, 1973, 796-798

TOPIC TAGS: flow limit, change, rapid loading, low temperature

ABSTRACT: This is a short answer to the criticism of the formula derived by the authors, expressing a relation between the flow limit ( $\sigma_T$ ), deformation speed ( $\dot{\epsilon}$ ) and temperature (T):

$$\sigma_T = D \left( \dot{\epsilon} e^{\frac{B}{T}} \right)^n. \quad (1)$$

where D, B and n are the material constants. The authors support validity of this formula by experimental results obtained with a brittle soft steel. They conclude that the formula satisfies the experimental data at temperatures below recrystallization, providing that the deformation process is of an isothermal nature and is

Card 1/2

L 18105-63

ACCESSION NR: AP3001707

not accompanied by phasal transformations.<sup>16</sup> Orig. art. has: 1 formula and 2 fig-  
ures.

ASSOCIATION: Fiziko-tehnicheskiy institut AN SSSR im. A. F. Ioffe (Institute of  
Physics and Technology, Academy of Sciences, SSSR)

SUBMITTED: 19Aug62

DATE ACQ: 11Jul63

ENCL: 00

SUB CODE: ML

NO REF SOV: 012

OTHER: 000

Card 2/2

S/057/63/033/002/016/023  
B108/B106

AUTHOR: Zlatin, N. A.

TITLE: The kinematic parameters in the initial stage of the collision process of plastic bodies

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 33, no. 2, 1963, 231 - 233

TEXT: The parameters are calculated for the collision of plastic bodies (particularly, ductile metals) with a semispace of similar properties. The paper is based on various Soviet and Western sources. Impact experiments carried out by the present author upon various metals (iron - lead, iron - aluminum, copper - aluminum, etc.) showed that the transient character of deformation of real compressible bodies in the initial stage of impact has no essential effect on the final result of the collision. Therefore, it is justifiable to use the model of an ideal, incompressible liquid. The most important English-language references are: R. J. Eichelberger, J. Appl. Phys., 27, no. 1, 63, 1956; M. A. Cook. J. Appl. Phys., 30, no. 5, 725, 1959; R. G. Queen, S. P. Marsh. J. Appl. Phys., 31, no. 7, 1253, 1960.

ASSOCIATION: Fiziko-tehnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad  
Card 3/2 (Physicotechnical Institute imeni A. F. Ioffe AS USSR, Leningrad)

VITMAN, F.F.; ZLATIN, N.A.

Collisions of deformable bodies and simulating the process. Part 1.  
Zhur. tekhn. fiz. 33 no.8:982-989 Aug. '63. (MIRA 16:11)

1. Fiziko-tehnicheskiy institut imeni A.F.Ioffe AN SSSR, Lenin-  
grad.

BELYAKOV, L.V.; VITMAN, F.F.; ZIATIN, N.A.

Collisions of deformable bodies and simulating the process. Part 2,  
Zhur. tekhn. fiz. 33 no.8:990-995 Ag '63. (MIRA 16:11)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Lenin-  
grad.

ACCESSION NR: AP4020582

3/0057/64/034/003/0518/0522

AUTHOR: Belyakov, L.V.; Vitman, F.F.; Zlatin, N.A.

TITLE: On the impact of deformable bodies and its simulation. 3. On the correspondence of the instantaneous values of the parameters of the simulated and simulating processes

SOURCE: Zhurnal tekhnicheskoy fiziki; v.34, no.3, 1964, 519-522

TOPIC TAGS: impact, deformable body, deformable body impact, simulation, impact simulation, deformable body impact simulation, steel dural impact, copper aluminum impact

ABSTRACT: On the basis of dimensional analysis, two of the authors have previously proposed the following general expression for the depth,  $l_K$ , of the crater formed by the normal impact of a body of revolution moving parallel to its axis on the plane surface of a large target (F.F.Vitman and N.A.Zlatin, DAN SSSR, 146, No.2, 337, 1962; ZhTF, 33, No.8, 982, 1963) and experimental evidence of its adequacy has been obtained (L.V.Belyakov, F.F.Vitman and N.A.Zlatin, Ibid, 33, No.8, 990, 1963).

Card 1/3

ACC.NR: AP4020582

$$\frac{L_K}{l_0} \approx \phi_1 \left( \frac{\rho_0 v_0^2}{H_1}, \frac{H_2}{H_1}, \frac{\rho_0 d}{\rho_0 l}, k_0, \frac{l_0}{d_0}, \frac{\rho_0 d_2}{\rho_0 d_1} \right)$$

Here  $H$  is the "dynamic hardness" of the material,  $\rho$  is the density, and  $a$  is the velocity of sound.  $l$  and  $d$  are characteristic longitudinal and transverse dimensions of the projectile and  $k$  is a form factor describing the shape of the projectile head.  $v_0$  designates the impact velocity. The subscripts 1 and 2 refer to the target and projectile materials respectively, and the subscript 0 indicates the values prior to impact. It was hypothesized that not only the final crater depth  $L_K$ , but also the values assumed during the course of the impact process by all the relevant parameters are functions of the dimensionless quantities appearing in this equation and of an appropriate reduced time. To test this hypothesis, impacts of soft steel cylinders with dural targets and copper cylinders with aluminum targets were observed by an x-ray technique similar to that employed by V.A.Tsukerman and M.A.Mankova (ZhTF,24,No.2,391,1957). The materials and the impact velocities were so chosen that the dimensionless parameters in the above equation had the same values in the two cases. It was found that the penetration depth, the projectile length, and the maximum projectile width all were the same functions of the reduced time  $t/\tau$  for the steel-dural collisions as for the copper-aluminum collisions. Here  $t$  is the

Card 2/3

ACC, NR: AP4020532

Time since contact and T is the duration of the impact process. T was 68 microsec for the steel-dural impact and 100 microsec for the copper-aluminum impact. Twelve x-ray photographs of the impacts are reproduced. Orig.art.han: 4 formulas and 3 figures.

ASSOCIATION: Fiziko-tehnicheskiy institut im.A.F.Ioffe AN SSSR, Leningrad (Physical-technical Institute, AN SSSR)

SUBMITTED: 09Feb63

DATE ACQ: 31Mar64

ENCL: 00

SUB CODE: PH

NR REF Sov: 017

OTHER: 006

Card 3/3

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7

1-20176-66  
ACC NR: AF0007088

191/001766/006/002/0368/0304

AUTHOR: Belyakov, L.V.; Zlatin, R.A.

TRANSLATOR: Yudin, V.N. DATE: 1988-08-16 TITLE: U.S.S.R. - Long Range Communications

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Card 122

DDC 534.66.001.11

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002065310007-7"

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7

1,20179-66

ACC NR: AP6007088

Verifications. When IZ/et was visited against 2,201 where it is the vicinity of Roudniki  
there was no sign of the former or the latter.

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002065310007-7

ACC NR: APC011426 EMA(1) LJP(c) SUBJECT CODE: DR/0020/66/157/304 C 78/078  
12/14/78

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002065310007-7"

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7

ACC-NR: AP6011426

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7"

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7

increment were 0.2 used for copper wire and 0.1 for aluminum wire. The increment for the insulation was 0.1.

Card 3/3

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7"

ACC NR: AP6032848

REF ID: A6110000000000000000

IJP(c)

JD/HW/JH

SOURCE CODE: UR/0020/86/170/003/0540/0543

AUTHOR: Belyakov, L. V.; Valitskiy, V. P.; Zlatin, N. A.; Mochalov, S. M.

82

79

ORG: Physical-Technical Institute im. A. F. Ioffe, Academy of Sciences SSSR (Fiziko-  
tekhnicheskiy institut Akademii nauk SSSR)

X3

TITLE: The melting of lead in a shock waveSOURCE: AN SSSR. Doklady, v. 170, no. 3, 1966, 540-543TOPIC TAGS: shock wave, x ray photography, high speed camera, pressure distribution,  
specific volume, thermodynamic analysis

ABSTRACT: A study was made of adiabatic heating of lead to the fusion point during impact shock loading. Thermodynamic analysis of melting in a shock wave is presented and schematic drawings are given of pressure as a function of specific volume and distance. Thermodynamic equations are given for the specific work done by pressure to  $\alpha\lambda$ , where  $\lambda$  is the specific heat of fusion and  $\alpha$  is a coefficient which depends on the shock pressure. Melting in a shock wave resulted in an entropy increase and a change in pressure distribution. These analytical results were checked by shock wave experiments on lead, in which high speed x-ray photographs were taken of the fractured ends of lead sheets. Impact velocities ranged from 1085 to 1570 m/sec. A sharp change in fracture appearance occurred at an impact velocity of 1250-1300 m/sec; this coincided

Card 1/2

UDC: 531.66.001.11

L 07413-67

ACC NR: AP6032848

3

with a mass velocity of 700 m/sec. It is known that melting of lead occurs in a shock wave when the mass velocity becomes 650-700 m/sec. This velocity corresponded to a pressure of  $230-250 \times 10^3$  atm and to a 22-23% change in specific volume. X-ray photographs are also shown of fracture in 1 mm thick lead sheets at an impact velocity of 1340 m/sec, during time intervals of 15, 30, 45, and 54 usec. These tests show that the difference between the speed of the split flange (initial fracture condition) and the residual mass of the "whiskers" (final fracture condition) was 3%, verifying the specific work equation. Sheet thicknesses ranging from 0.5 to 3 mm were tested 15 usec after the moment of fracture at 1340 m/sec. Some of the sheets were covered with 0.05 mm thick aluminum foil during testing. The use of the foil changed the spacings of cleavage "whiskers". These experiments confirmed that the originally postulated position of shock adiabates of lead in the solid and two-phase conditions was correct. A calculation of the relaxation time from the data gave  $3 \times 10^{-7}$  sec. Presented by Academician B. P. Konstantinov on 13 December 1965. Orig. art. has: 4 figures, 2 formulas.

SUB CODE: 11/ SUBM DATE: 27Nov65/ ORIG REF: 008/ OTH REF: 001

Card 2/2, da

ML 07367-67 ENT(1)/EWT(1)/EWT(m)/EWP(1)/EWP(m)/EWP(l)/RTI IMP(s) ID/ES/IL  
ACC NRI AF6033425 SOURCE CODE: UR/0057/66/036/010/1875/1882

AUTHOR: Belyakov, L. V.; Valitskiy, V. P.; Zlatin, N. A.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tehnicheskiy institut AN SSSR)

TITLE: Thermal effects accompanying an impact on a metal half-space

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 10, 1966, 1875-1882

TOPIC TAGS: impact, impact effect, impact thermal effect, impact effect modeling, metal test

ABSTRACT: The article discusses experiments aimed at expanding the range of applicability of criteria to parallel the effects between low-speed impact of one pair of materials to similar effects for a pair of different materials at a higher, experimentally unattainable, speed. The upper limit of the interval for which the modeling curve will yield correct results is discussed at some length. The concept of "threshold speed" is introduced. Threshold speed corresponds to the discontinuity of the modeling curve caused by melting of the metals in question and is estimated at about 0.7 to 1 of the velocity of sound in the given metal. If the threshold speed is correctly determined, the modeling curve should yield accurate data on impact results for speeds at least 3 to 3.5 times higher than the experimental. Experiments were conducted in which blocks of lead, tin, and cadmium were impacted by aluminum disks 4 mm thick and 15 mm in diameter at speeds up to 24 km/sec.

Card 1/2

21

UDC: 531.66.001.11

24

54

B

L 07367-67

ACC NR: AP6033425

The results were in good agreement with calculated threshold speeds. A marked difference was observed in the cavities formed at impact speeds of about 1 km/sec and those obtained at about 1.7 to 1.8 km/sec, the latter showing conical deepening with evidence of fusing of the target. A special high-speed x-ray investigation of the process at impact speeds up to 2.4 km/sec confirmed the ejection of molten material at speeds of 1.7 to 1.8 km/sec and higher. Further confirmation of the threshold speed magnitudes was obtained in a special series of x-ray tests in which a copper cylinder was made to hit thin (about 0.05 of the diameter of the cylinder) sheets of lead, tin, and cadmium. The threshold speeds for metals with higher melting point were calculated on the assumption that the heating up of the target by the impact is a function of the mass speed developed by the shock load and obeys the same law for all metals. The results of calculations for a number of metals confirm the assumption and agree with experimental data from various sources. Reference is made to the experiments of A. C. Charters (Sci. Amer. v. 203, no. 4, 1960, 128), whose results could be extrapolated for impact speeds of 30 to 50 km/sec. Orig. art. has: 6 figures.

SUB CODE: 20/ SUBM DATE: 18Oct65/ ORIG REF: 012/ OTH REF: 007/ ATD PRESS: 5101

Card 2/2 afa

BELYAKOV, L.V.; VALITSKIY, V.P.; ZLATIN, N.A.

Role of heat phenomena in the collision of metal bodies. Dokl.  
AN SSSR 160 no.2:314-316 Ja '65.

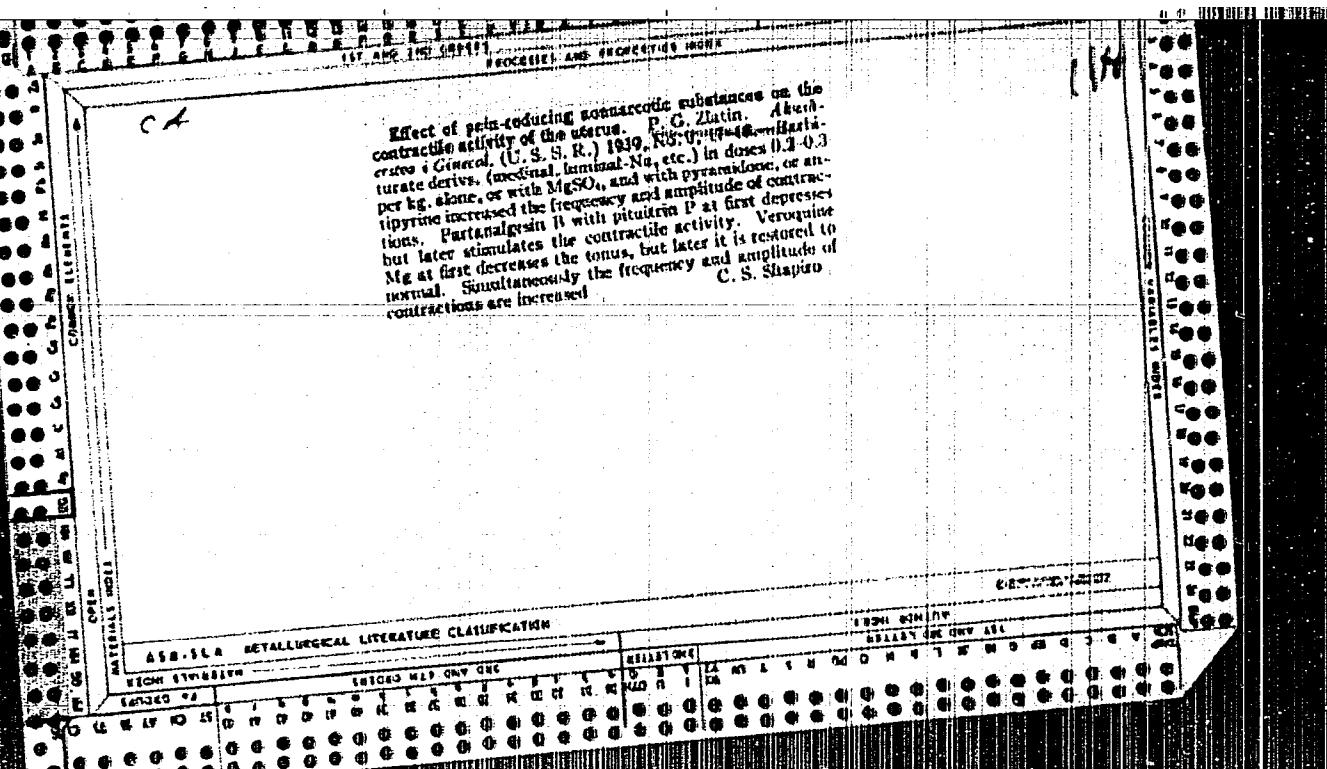
(MIRA 18:2)

1. Fiziko-tehnicheskiy institut im. A.F. Ioffe AN SSSR. Sub-  
mitted August 3, 1964.

BELYAKOV, L.V.; VITMAN, F.F.; ZLATIN, N.A.

Process of collisions between deformable bodies and its  
simulation. Part 3. Zhur. tekhn. fiz. 34 no. 3:519-522 Mr '64.  
(MIRA 17:5)

1. Fiziko-tehnicheskij institut imeni A.F.Ioffe AN SSSR,  
Leningrad.



VALUYEVA, T.K. [Valuieva, T.K.]; ZLATIN, R.S.; ROYTRUB, B.A.

Effect of ACTH on higher nervous activity in dogs and the interaction  
of blood proteins and ascorbic acid. Fiziol. zhur. [Ukr.] 10 no.3(322-  
328 My-Je '64. (MIRA 18:9)

1. Laboratoriya endokrinnykh funktsiy i otdel nevrofiziologii i nevrologii  
Instituta fiziologii im. A.A.Bogomol'tsa AN UkrSSR, Kiyev.

MAKARCHENKO, A.F. [Makarchenko, O.F.]; SIROTINA, M.F. [Syrotina, M.F.];  
ZLATIN, R.S.

Changes in the morphological composition of the peripheral blood  
in dogs of different types of higher nervous activity as affected  
by long-term external irradiation with small doses of gamma rays  
( $\text{Co}^{60}$ ). Fiziol.shur. [Ukr.] 5 no.6:769-774 N-D '59. (MIRA 13:4)

1. Institut fiziologii im. A.A. Bogomol'tsa Akademii nauk USSR.  
(BLOOD--ANALYSIS AND CHEMISTRY) (GAMMA RAYS--PHYSIOLOGICAL EFFECT)

MAKARCHENKO, A.F. [Makarchenko, O.P.]; ZLATIN, R.B.

Current philosophical problems in the reflex theory. Fiziol.  
zhur. [Ukr.] 9 no. 5:569-578. S-0-63  
(NIR 17:4)

1. Institut fiziologii im. Bogomol'tsa AN UkrSSR, Kiyev.

VORONTSOV, D.S.; ZLATIN, R.S.

Outstanding scientist of Lenin's cast; on the occasion of  
the 60th birthday of Academician G.F. Makarchenko, member of  
the Academy of Sciences of the Ukrainian S.S.R. Fiziol. zhur.  
[Ukr.] 9 no. 6:805-809 N-D '63. (MIRA 17:8)

ZLATIN, R.S.

Principle of structure and the problem of interrelations between  
psychic and physiological phenomena. Fiziol. zhur.[Ukr.] 9 no.1:22-  
26 Ja-F '63. (MIRA 18:5)

MAKARCHEV, A.F., akademik; ROYTBEB, B.A.; ZLATIN, R.S.

Changes in the macrostructure of blood proteins following excitation of the central nervous system. Dokl. AN SSSR 190 no.3:731-733 (MIR 18:3) Ja 165.

I. Institut Fiziologii im. A.A. Bogomolets Akad. Nauk SSSR

MAKARCHENKO, A.F.; ROYTEBIS, B.A.; ZLATIN, R.S.

Effect of an excitation process in the cerebral cortex on the  
macrostructure of proteins in the peripheral blood. Zhur. vys.  
nerv. deliat. 15 no.5:838-845 5-0 '65.

(MIRA 18:11)

I. institut fiziologii im. A.A. Bogomol'tsa AM UkrSSR, Kiev.

ZLATIN, R.S.

Effect of modification of intensity of the stimulus on the balance  
of depression and restoration; experience with salivary reflexes.  
Vopr. fiziolog. no. 9:117-126 '54. (MIRA 14:1)

1. Institut fisiologii im. A.A. Bogomol'tsa Akademii nauk USSR,  
Laboratoriya vyschey nervnoy deyatel'nosti.

(NITROGEN,

in saliva, eff. of intensity of digestive  
stimulus)

(SALIVA,

nitrogen, eff. of intesity of digestive stimulus)

ZLATIK, R. S.

ZLATIK, R. S.= "The effect of changes in the intensity of stimulation on the balance between the processes of inhibition and stimulation (using the salivation reflex as an example)." Kiev Order of Labor Red Banner Medical Institute A. A. Bogomolets. Kiev, 1956. (Dissertations for the Degree of Candidate in Biological Sciences).

SC: Krichinskyi Letopis' No. 22, 1956

MAKARCHENKO, A.F. [Makarchenko, O.F.]; ZLATIN, R.S.

Changes in the higher nervous activity of dogs produced by  
chronic exposure to small doses of ionizing radiation.  
Fiziol. zhur. [Ukr.] 5 no.1:16-23 Ja-F '59. (MIRA 12:5)

1. Institut fisiologii im. A.A.Bogomol'tsa AN USSR.  
(GAMMA RAYS--PHYSIOLOGICAL EFFECT) (CONDITIONED RESPONSE)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7

ZLATIN, R.S.

Effect of ionizing radiations on the nervous system of animals.  
Fiziol. zhur. [Ukr.] 5 no.1:132-146 Ja-F '59. (MIRA 12:5)  
(RADIATION—PHYSIOLOGICAL EFFECT) (NERVOUS SYSTEM)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7"

ZIATIN, R.S.

Changes in the secretory function of salivary glands in connection  
with fatigue and restoration. Fiziol zhur. (Ukr.) 1 no.1:70-75  
Ja-F '55. (MLRA 9:9)

1. Institut fiziologii imeni akademika O.O.Bogomol'tsya Akademii  
nauk URSR.  
(SALIVARY GLANDS) (FATIGUE)

ZLATIN, R.S.

At the Sixth Congress of the Ukrainian Physiological Society,  
Fiziol. zhur. [Ukr.] 7 no.6:849-851 N-D '61. (MIRA 15:3)  
(UKRAINE—PHYSIOLOGY—RESEARCH)

41470  
S/238/62/008/005/001/001  
D267/D308

27.2400

AUTHORS:

Zlatin, R.S., Makarchenko, O.F. and Sirotina, M.F.

TITLE:

Characteristics of physiological and biochemical shifts associated with the protracted action of small doses of Co<sup>60</sup> gamma-rays on organisms

PERIODICAL:

Fiziologichnyy zhurnal, v. 8, no. 5, 1962, 567-571

TEXT:

The authors have been prompted to carry out this research by their earlier results relating to neurological and hematological changes observed in personnel working under conditions of chronic exposure to ionizing radiation. The higher nervous activity (using the alimentary secretion method) the composition of peripheral blood and some biochemical factors were studied in six dogs (4 experiment animals and 2 controls), the experiment animals being subjected to chronic whole-body irradiation with very small doses (0.05 r during 6 hours) of the Co<sup>60</sup> gamma radiation. The experiment lasted 3 years. Three characteristic stages could be found in the changes of higher nervous activity: (1) the

Card 1/3

S/238/62/008/005/001/001  
D267/D308

Characteristics of ...

first stage lasts  $1\frac{1}{2}$  to  $2\frac{1}{2}$  months and is characterized in the case of strong-type dogs by the variation of positive conditioned reflexes within the standard limits, the lower limit being steadily approached, and by a certain extension of the latent period of these reflexes; for the weak-type dogs the positive conditioned reflexes first increase and then revert to the initial value, while the latent period is shortened; (2) the second stage lasts from 7 to 18 months and is characterized by the decrease of positive conditioned reflexes and by further extension of the latent period; (3) the third stage (which lasted to the end of the experiment) is characterized by the low level of reflexes, their latent period being longer than the initial value. Internal inhibition was enhanced in the second stage, and manifestly disturbed in the third stage. During the period after irradiation the experiment animals disclosed a persistent increase of positive reflexes and further disturbance of internal inhibition (in 2 dogs out of 3 surviving dogs, one having died from pneumonia). The hematological changes are characterized by a drop of leucocyte count the the lower limit of the norm during the last 8 months of irradiation.

Card 2/3

Characteristics of ...

S/238/62/008/005/001/001  
D267/D303

by a polycythemic reaction, an increase in the number of thrombocytes from the 5th to the 50th month of irradiation, and by the absence of degenerative changes. The beta activity of the whole blood decreases during irradiation. Desoxyribonuclease was found in the urine of the irradiated dogs, but not in control dogs.  
There are 1 figure and 1 table.

ASSOCIATION: Instytut fiziologii im. O.O. Bohomol'tsya Akademii nauk URSR, Kiev (Institute of Physiology im. O.O. Bohomolets Academy of Sciences of the UkrSSR, Kiev)

SUBMITTED: July 15, 1961

Card 3/3

MAKARCHENKO, A.F.; ZLATIN, R.S.; SIROTINA, M.F.

Change in higher nervous activity and in the peripheral blood  
picture during prolonged gamma-ray irradiation ( $CO_60$ ) of dogs.  
Zhur. vys. nerv. deiat. 11 no.5:895-901 S-0 '61. (MIRA 15:1)

1. Bogomolets Institute of Physiology, Ukrainian Academy of Sciences,  
Kiev.

(GAMMA RAYS—PHYSIOLOGICAL EFFECT) (NERVOUS SYSTEM)  
(CONDITIONED RESPONSE) (BLOOD)

ZLATIN, R.S.; MAKARCHENKO, A.F. [Makarchenko, O.F.]; SIROTINA, M.F. [Syrotina, M.F.]

Characteristics of the physiological and biochemical changes in <sup>60</sup>Co prolonged action on the body of small doses of gamma radiation. Co Fiziol. zhur. [ukr.] 8 no.5: 567-573 S-0 '62. (MIRA 17:11)

1. A.A. Bogomoletz Institute of Physiology of the Academy of Sciences of the Ukrainian S.S.R., Kiyev.

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7

POVOLOTSKIY, L.Ya., inzh.; ZLATKIN, B.R., inzh.

Methodology for consolidated determination of the cost of power  
transformers. Elektrotehnika 36 no.10:19-22. 0 '65.

(MERA 18:10)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7"

KASHKIN, P.N.; ZLATINA, K.N.; STAVSKAYA, V.V.; FRIDMAN, E.A. (Leningrad)

Etiology of pneumonia. Klin.med. no.4:31-37 '62. (MIRA 15:5)

1. Iz kafedry mikrobiologii (zav. - prof. P.N. Kashkin) Instituta usovershenstvovaniya vrachey imeni S.M. Kirova, kafedry propedevticheskoy terapii (zav. - deyствител'nyy chlen AMN SSSR prof. M.D. Tushinskiy [deceased]) i Leningradskogo meditsinskogo instituta imeni akad. I.P. Pavlova i otdeleniya virusologii (zav. E.A. Fridman) Instituta imeni Pastera.

(PNEUMONIA)

ZLATINA, K. M.

USSR/ Microbiology. Antibiosis and Symbiosis.  
Antibiotics

Abs Jour: Ref Zhur - Biol., No 6, 1958, 24123

Author : Kashkin, P. N., Zlatina, K. M., Golyakov, I. N.,  
Kashkin, K. P., Yamshchikov, V. P.

Inst : Not given  
Title : Variability of Microorganisms in Leucocyte Cul-  
tures Under the Effect of Antibiotic Preparations.

Orig Pub: V sb.: Zhivye vaktsiny. M., 1956, 289-295

Abstract: Leucocytes develop well in the presence of doses  
of streptomycin, penicillin, syntomycin, biomycin,  
and levomycetin which exceed maximum therapeutic  
doses for humans, and therefore they may be util-  
ized for studying adaptive variability of micro-  
organisms under the influence of antibiotics. By  
transferring leucocytes in cultures with increas-

Card 1/2

ZLATINA, S.A.; LEVIN, A.N.

Obtaining chemically uniform copolymers. Plant, massy no.10;3-7  
'63. (MIRA 16:10)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7

ZLATINA, S.A.; LEVIN, A.N.

New copolymers of vinyl chloride. Plast.massy no.1:3-8  
"60.  
(Vinyl compounds)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7"

ZLATINA, S.A.

Continuous processes in the production of high-polymer materials  
and articles. Plast.massy no.5:77-78 '60. (MIRA 13:7)  
(Polymers) (Plastics)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7

ZLATKIN, V.P. (Leningrad); GALANI, V.P. (Novocherkassk); EPELMAN, I.B.  
(Shchokino, Tul'skoy obl.)

Make gas available to the enterprises of big chemistry. Stroi.  
truboprov. 9 no.1:3-15 Ja '64. (MIRA 17:3)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7"

ZLATKIN, V.P.

Selfless labor of the builders of the "Druzhba" Petroleum Pipeline.  
Stroi. truboprov. 8 no. 12-3 D '63. (MIRA 17:4)

1. Stroitel'no-montazhnoye upravleniye No.7 Mosgazprovodstroy,  
Leningrad.

ZLATITSKAIA, N.N. (Leningrad, ul. Solusa pechatnikov, d.25-a, kv.11)

Age characteristics of motor neural endings in the human tongue  
Arkh. snat. glist. i embr. 33 no.1:35-40 Ja-Mr '56 (MIRA 12:1)

1. Iz laboratorii morfologii cheloveka (sav. - A.K. Koveshnikova)  
Gosudarstvennogo yestestvenno-nauchnogo instituta im. P.F. Leesgafte.  
(TONGUE, innervation,  
motor nerve endings, age factor (Rus))  
(NERVE ENDINGS,  
tongue, age factor in structure of motor endings (Rus))  
(AGING, physiology,  
of tongue motor nerve endings (Rus))

ZLATITSKAYA, N.N. (Leningrad)

Morphology of axovasal synapses in the human cerebral cortex in  
cardiovascular disorders accompanied by acute oxygen insufficiency.  
Arkh.pat. no.10:38-42 '61. (MIRA 14:10)

1. Iz kafedry normal'noy anatomi (nach. - chlen-korrespondent  
AMN SSSR prof B.A. Dolgo-Saburov [deceased]) Voyennno-meditsin-  
skoy ordena Lenina akademii imeni S.M. Kirova.  
(ANOXEMIA) (CARDIOVASCULAR SYSTEM-DISEASES)  
(CEREBRAL CORTEX)

ZLATITSKAYA, N.N. (Leningrad, ul. Soyusa Pechatnikov, 25a, kv.11)

Dendritovasal relationships in the human brain. Arkh.anat.gist.i  
embr. 38 no.4:45-50 Ap '60. (MIRA 14:5)

1. Kafedra normal'noy anatomi nachal'nik - chlen-korrespondent  
AMN SSSR prof. B.A.Dolgo-Saburov) Voyenno-meditsinskoy ordena  
Lenina akademii imeni S.M.Kirova.  
(CEREBRAL CORTEX)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7

L-19565-66 EWT(m)/DWP(j)/EWA(h)/CWA(1) WW/RM

ACCESSION NF APSC 1758

AUTHOR: R. L. S.

UR/0000/69/112/002/0370/0342

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7"

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7

1036-166

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7"

ZLATITSKAYA, N.N. (Leningrad, ul. Soyura Pechatnikov, d.25-a, kv.11)

Synaptic connections between the neurons and capillary bed in the  
human spinal cord. [with summary in English]. Arkh. anat. gist.  
i embr. 35 no.4:47-50 Jl-Ag '58 (MIRA 11:10)

1. Kafedra normal'noy anatomi (nach. - chl.korr. AM SSSR prof.  
B.A. Dolgo-Saburov) Voyenno-meditsinskoy ordena Lenina akademii  
imeni S.M. Kirova.

(SPINAL CORD, anat. & histol.  
synapses between neurons & capillaries (Rus))

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7

ZLATKIN, M.G.

Forging special steels. Kuz.-shtam. proizv. l no. 7:1-5 J1 '59.  
(MIRA 12:10)

(Forging) (Steel)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065310007-7"

Translation from: Referativnyy zhurnal Metallurgiya, 1959, Nr 3, p 282 USSR) SOV/137-59-3-6889

AUTHOR: Zlatkin, M. G.

TITLE: Improving the Technology of Open-die Forging (Sovershenstvovaniye tekhnologii svobodnoy kovki)

PERIODICAL: Sb. stately. Ural'skiy z-d tyazh. mashinostr. im. S. Ordzhonikidze, 1958, Nr 5, pp 34-45

ABSTRACT: Increased labor efficiency and greater output of sound product, coupled with a reduction in the amount of material allowed for machining and a reduction of labor consumption, were achieved by the adoption of the following measures: The employment of small ingots without shrinkage heads (output of sound stock 76-78%) in the manufacture of hollow articles of considerable internal dimensions; employment of ingots weighing up to 100 tons and having small shrinkage heads in the manufacture of hollow forgings (output of sound product 70-73%); adoption of elongated ingots; establishment of new allowance standards for articles made of special alloys; heat treatment of articles at the forging stage and elimination of the need for secondary material allowances for heat treatment; employment of mandrels and

Card 1/2

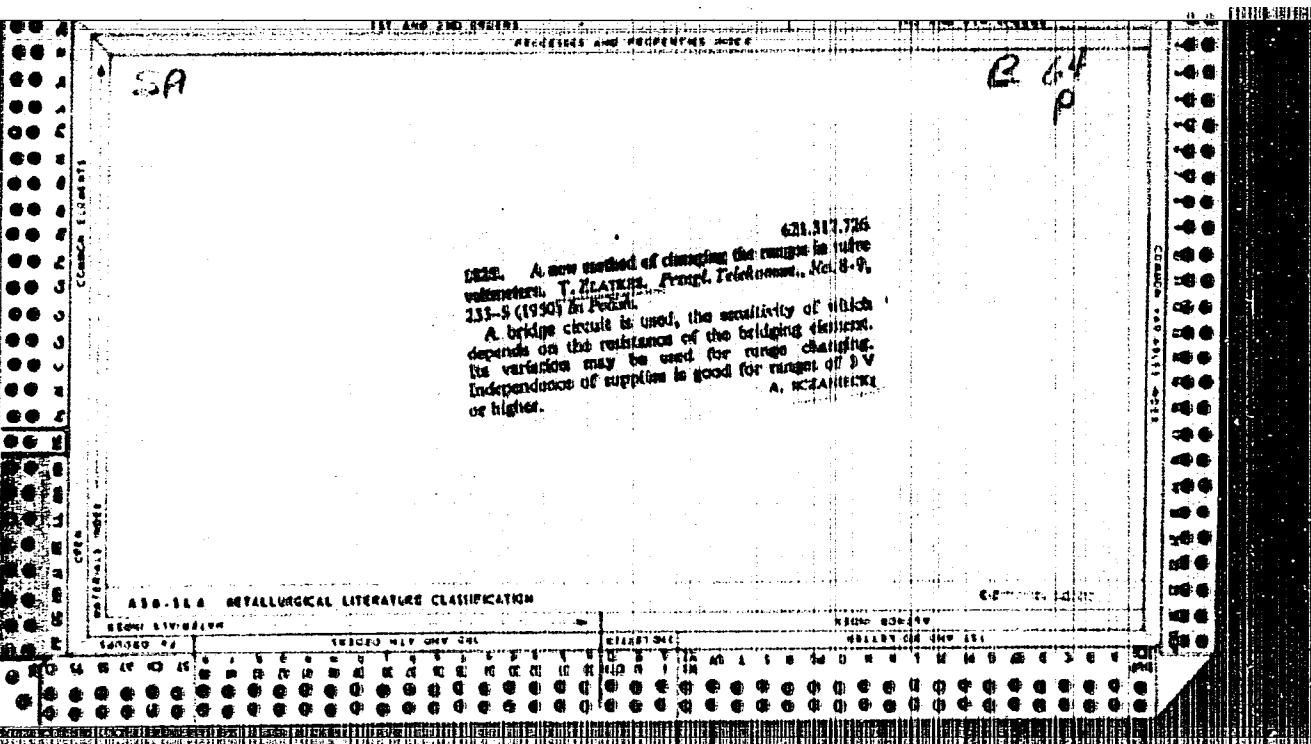
Improving the Technology of Open-die Forging

SOV/137-59-3-6889

grooved hammers conforming to the configuration of the article (forging of shaped rings); employment of constructive techniques; utilization of pipe stock in the manufacture of hollow rollers employed in roll tables of rolling mills; manufacture of forgings for hollow cylinders with spindles being made of the shrinkage-head material; rotation of forgings and billets with the aid of the table and the ram of the press; and other measures.

Ye. L.

Card 2/2



STARZYSKI, Stefan; ZLATEK, Tadeusz

A case of bilateral symmetric necrosis of the renal cortex in puerperium. Gin.polska 30 no.3:389-396 Wy-Je '59.

l. Z Zakladu Anatomii Patologicznej A. M. w Warszawie  
Kierownik: prof. dr med. L. Paszkiewicz i z I Kliniki  
Polonictwa i Chorob Kobiecych A. M. w Warszawie Kierownik:  
prof. dr n. med. A.Czyzewicz.

(PUERPERIUM compl)  
(KIDNEY DISEASES in pregn)

ZIATKES, Tadeusz

Case of simultaneously existing separate cancers of the uterus & ovaries. Gin. polska 28 no.5:603-611 Sept-Oct 57.

1. Z I Kliniki Polonistwa i Chorob Kobiecych A. M. w Warszawie.  
Kierownik: prof. dr nauk med. A. Czyzewicz.

(UTERUS NEOPLASMS, compl.

cancer of ovaries, case report (Pol))

(OVARIES, neoplasms

with cancer of uterus, case report (Pol))

Poland/General Problems of Pathology - Comparative Oncology U-1

Abs Jour : Ref Zhur - Biol., No. 18, 1958, 84941

Author : Zlatkes, Tadeusz

Inst : no institute is given

Title : A Case of Simultaneous Presence of Carcinoma of the  
Uterus and Ovary

Orig Pub : Gineol. polska, 1957, Vol. 28, No. 5, 603-611

Abstract : No abstract is given

Card 1/1

ZLATINS, Tadeusz (Warszawa, Strykiewicza 3)

Recent concepts in the treatment of shock and collapse. Gin.  
polska 25 no.4:440-452 Oct-Dec 54

1. Z I Kliniki Polonictwa i Chorob Kobiecych w Warszawie. Kierownik:  
prof. dr. Adam Grysiewicz.  
(SHOCK, therapy.)

TRIFEL', M.S.; SHCHEGOL', Sh.S.; MAZO, R.E.; ZLATKIN, B.S.

Cathodic protection of heat exchangers cooled by sea water.  
Zashch. met. 1 no.2:245-246 Mr-Ap '65.

(MIRA 18:6)

1. Sungaitskiy zavod sinteticheskogo kauchuka.

ZLATKIN, I. Ya.

Dissertation defended for the degree of Doctor of Historical Sciences in the  
Institute of the Peoples of Asia

"History of the Dzhungarskoye Khanate (1635-1758)."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145